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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,975	02/27/2002	Brent S. Nelson	006943.00615	6913

66811 7590 09/18/2007

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EXAMINER	
WEINSTEIN, STEVEN L	
ART UNIT	**PAPER NUMBER**
1761	

MAIL DATE	DELIVERY MODE
09/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/083,975	NELSON, BRENT S.	
	Examiner	Art Unit	
	Steven L. Weinstein	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20,32-34,38 and 39-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20,32-34,38 and 39-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☒ Other: A second copy of a page of a reference previously cited - Wiley Encyclopedia of Packaging Technology p. 83

Claims 1-6,8,9,32-34,38-42, and 44-52 are rejected under 35USC112, 2nd paragraph as being indefinite. The preamble of claims 1,38 and 39 are inconsistent with the body of these claims. This is because claims the preamble of claims 1,38,and 39 recite a hot filled container, yet the body of the claims are silent as to any contents; hot filled or otherwise. It would appear that the body of these claims should recite a hot filled product. Finally, it is not clear what the distinction is between a corner and a rib.

Claims 1-9,32-34, 51,52,38, and 39-50 are rejected under 35USC112,1st paragraph as being based on New Matter/nonenabling disclosure. Claim 1 recites that the "entire" periphery of the body portion has a "smooth" outer contour. It is not seen that the specification supports this language; especially in view of the disclosed structure. What does "smooth" mean in this context and where is there support for this language? Also, although the specification discloses the panels are square or rectangular and flat, the drawings show these panels to have somewhat of a curve. Also, claim 1 does not recite the nature of the corners, which therefore are readable on right angled corners, which could still be considered to reflect an entire periphery of the body portion having a "smooth" outer contour. Does this language mean that the panels and the corners are continuously smooth respective to each other? The phrase is nor clear and does not appear to be defined in the specification. Claim 39 shares the issues raised above in regard to the smooth outer contour, whereas claim 38 includes the issue of the rectangular panels and the nature of the corners. Finally, as disclosed, the specification does not make a clear distinction between a rib and a corner.

Claims 1-9, 32, 33, 34,~~51~~,52,38, and 39-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al (5,222,615) in view of Leigner (5,092,474), Tobias et al (5,762,221) and Ogg (6,044,997), further in view of Sugiura (4,749,092), Ota (5,238,129), Brody(5,740,934), Hayashi (4,877,141), and Welker(3,923,178), and further in view of Wiley Encyclopedia of Packaging Technology (hereinafter called "Wiley").

Reference is made to the Office action mailed 2/7/07, as well as the previous Office actions. Claim 1 now recites that the panel sections and the corners cooperate to define the entire periphery of the body portion such that the entire periphery of the body portion has a smooth outer contour uninterrupted by ribs, stress absorbing strips, raised areas or recessed areas. It would appear a more accurate phrasing would be "uninterrupted and devoid of..." if, indeed, that was accurate. As noted previously, Ota et al ('615), as further evidenced by Tobias et al, Ogg, Sugiura et al, Ota ('129),etc., disclose that it was notoriously conventional to provide any plastic containers, and especially containers that are to be hot filled with a bell portion, body portion, and a base portion, wherein the body portion is isolated from the bell and base portions by protrusions (e.g., Ota et al ('615), Tobias et al and Ogg), and wherein the body portion has panels which flex to act as vacuum panels. In regard to the new recitation mentioned above, and as noted above, it is not seen how a corner differentiates from a rib. The new recitation appears to differ from the bell, base, and panel containing containers in the absence of ribs or raised or recessed areas. The art taken as a whole, including Ota et al ('615), disclose that these features help control the flexing of the

panels when a vacuum forms, for example, during hot filling. It is important to note that these references do not disclose that flexing would not occur without these features. All of the references are directed to flexing of at least portions of the panels. The claims attempt to claim that the entire panels, defined by corners, flex. At best, it would appear that how much of a panel flexes and whether one provides additional structural features to help control flexing appears to be no more than a matter of degree. Evidence for this is found in Sugiura et al who unequivocally discloses a container capable of being used in hot filling, wherein the container contains flat panels which are defined by curved ribs, which, contrary to what has been urged, are nothing more than corners. Thus, Sugiura et al discloses that flat panels with connecting rounded corners have been used as vacuum panels for hot filled containers without any additional structure, so to eliminate the additional structure and its function would have been obvious. The art taken as a whole also discloses other containers, which employ flat panels as pressure deflecting panels as noted previously. It does not matter what is the particular context of these panels, since they are being used in the generic context of absorbing pressure differentials. Thus, the art taken as a whole discloses all of the recited structure is conventional, including the bell shaped top portion, the base, the flat vacuum panels containing body portion and the shoulders between the top and base portion and the body portion, and to employ these conventional features for their art recognized and applicants intended result would have been obvious. It is urged that the flat panels will act as vacuum panels and the flat surfaces can be provided with a label. The art taken as a whole discloses flat panels can be employed as vacuum panels and the art taken

as a whole discloses placing labels onto flat or at least partially flat surfaces including the middle body portion. There is no unexpected result. It appears that an urging is being made that no one thought one could have flat panels, which act as vacuum panels. If so, this urging is not convincing. Since all of the structure is found in the prior art and for applicants intended result (such as flat vacuum panels, bell shapes for stacking, etc), there appears to be no new or unexpected result. Also, if this is what is being urged, what has been done or recited that is different? All the recited structure is present in the references. However, it is also noted that varying thicknesses and providing a defecting bottom portion (the latter being disclosed but not claimed) would also function to affect the degree of flexing of vacuum panels. Finally, the particular shape of the panels and their extent relative to the ridges are seen to have been an obvious matter of design, routinely determinable in view of the art recognized goal of providing vacuum panels. Claims 38- 45 are rejected for the reasons given above and in the Office action mailed 2/7/07.

Claims 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiley Encyclopedia of Packaging Technology in view of applicant's admission of the prior art, further in view of Visioli ('901) and Wright et al ('353), for the reasons given in the Office action mailed 2/7/07.

Claims 46-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1-9,32,33,34,52,38, and 39-45 above, and further in view of applicant's admission of the prior art, Visioli and Wright who are applied for the reasons given in the Office action mailed 4/18/06 and above.

All of applicants remarks filed 7/9/07 have been fully and carefully considered and are considered to either have been addressed previously, since they have been previously presented, or are addressed above in the body of the rejection.

In response to the comments that the Wiley reference did not have a clear photograph, another copy of the photograph is attached to this Office action. This photograph is only being relied to as further evidence that the basic container structure of a blow molded container having a dome like top and a base, and a body portion there between with flat walls and curved corners, and wherein the top and base have a ledge that extends beyond the body portion, is well established in the art. The structure of the blow molded bottle on page 83 is similar to the bottle pictured on page 91, other than, of course, the circular body, rather than the flat body.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven L. Weinstein whose telephone number is 571-272-1410. The examiner can normally be reached on Monday-Friday 7:00 A.M.-2:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steve Weinstein
STEVE WEINSTEIN 1761
PRIMARY EXAMINER
9/14/07

32. Y. Tokiwa, T. Ando, and T. Suzuki, *J. Fermentation Technol.* **54**, 603–608 (1976).
33. W. J. Bailey, Y. Okamoto, W. C. Kuo, and T. Nanta, *Proc. Internatl. Biodegradation Sympo.*, 1976, pp. 765–773.
34. S. J. Huang, *Encycl. Polym. Sci. Eng.* **2**, 220–243 (1985).
35. L. Koskan, *Industrial Bioprocessing*, 1–2 (May 1992).
36. R. T. Darby and A. M. Kaplan, *Appl. Microbiol.* **16**, 900–905 (1968).
37. J. P. Casey and D. G. Manly, *Proc. Internatl. Biodegradation Sympo.* 1976, pp. 819–833.
38. J. Roemesser, presentation at Plastics Waste Management Workshop, American Chemical Society, Polymer Chemistry Division, December, New Orleans, LA 1991.

CATIA BASTIOLI
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Novara, Italy

BLISTER PACKAGING. See CARDED PACKAGING.

BLOW MOLDING

Blow molding is a process used to produce hollow articles and bottles, such as those shown in Figure 1, from thermoplastic materials. The basic process involves the manufacture, by either extrusion molding or injection molding, of a "preshape" usually called a *preform* or *parison*. While still warm, the parison is inflated, that is, "reshaped" with air pressure inside a female mold cavity of the bottle.

The most common materials used for bottle packaging applications are high-density polyethylene (HDPE) and polyethylene terephthalate (PET). Other materials often used are polypropylene (PP), low-density polyethylene (LDPE), polystyrene (PS), and poly(vinyl chloride) (PVC).

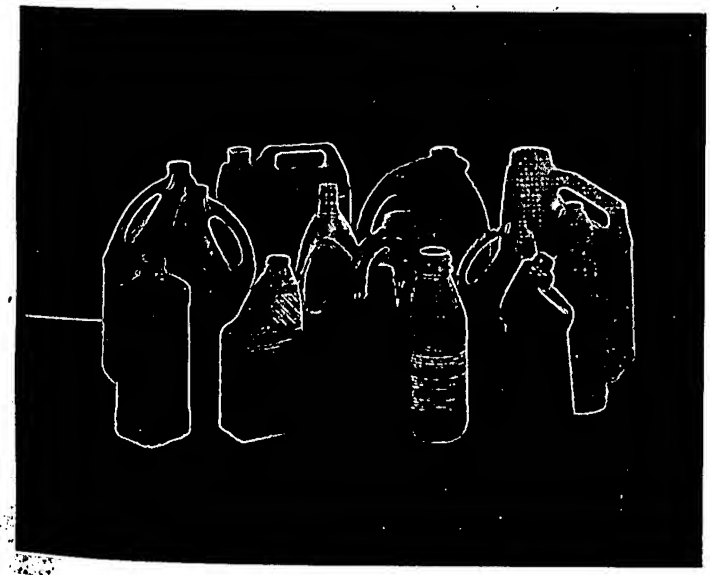

Figure 1. An array of extrusion blow-molded bottles. Courtesy of Johnson Controls, Inc.

History

The first attempt to blow-mold hollow plastic articles, about 120 years ago, was with two sheets of cellulose nitrate clamped between two mold halves. Steam injected between the sheets softened the material, sealed the edges, and expanded it against the mold cavity (1). The highly flammable nature of cellulose nitrate limited the usefulness of the technique.

In the early 1930s the availability of more suitable materials, polystyrene and cellulose acetate, led to the development of automated equipment, based on glass-blowing techniques, by the PLAX Corp. and Owens-Illinois (1,2). Unfortunately, the plastic bottles offered no advantage over glass bottles; however, the availability of low-density polyethylene in the early 1940s provided the needed advantage. The "squeezability" of this material gave the plastic bottle a feature glass could not match.

Nonetheless, the real beginning of blow molding came in the late 1950s with the development of high-density polyethylene and the availability of commerical blow-molding equipment (1). High-density polyethylene provided the stiffness needed for many bottle applications, and commerical equipment provided the opportunity for many firms to start blow molding. Until that time, all blow molding was done by a select few, using proprietary technology.

Basic Process

Figure 2 illustrates the basic blow-molding process. Although the extrusion method for creating the parison or preform is shown, that detail does not alter the fundamental blow-molding principle of a process based on an injection method. Nonetheless, the extrusion method is the most common.

In view **a** the hot tube-shaped parison is extruded downward between the two halves of a bottle blow-mold cavity. The blow pin in this example is shown inside the parison.

In view **b** the blow-mold cavity has closed pinching the parison flat. The inside is sealed at the bottom and around the top and blow pin. The pinching of the parison creates flash material that must later be trimmed away and recycled. This flash is often 20–50% of the bottle weight.

In view **c** the pinched parison is inflated into the bottle shape by air flowing through the blow pin. The air pressure is held inside until the newly molded bottle is cooled by the mold. Water, circulating through channels, is used to cool and maintain mold temperature.

In view **d** the newly molded bottle is ejected from the mold cavity. Removal is either downward or to the side. Once outside the molding area the flash is trimmed away.

Extrusion Blow Molding

Extrusion blow molding is divided into two broad categories: continuous extrusion and intermittent extrusion. These, in turn, are divided into other subcategories. Bottles, containers, or drums of virtually any size can be made by extrusion blow molding. Compared to injection blow molding, extrusion blow-mold tooling is relatively inexpensive. Finally, extrusion blow molding has relatively few shape restrictions, and it is the only low-cost method for manufacturing a bottle with a handle.

32. Y. Tokiwa, T. Ando, and T. Suzuki, *J. Fermentation Technol.* **54**, 603–608 (1976).
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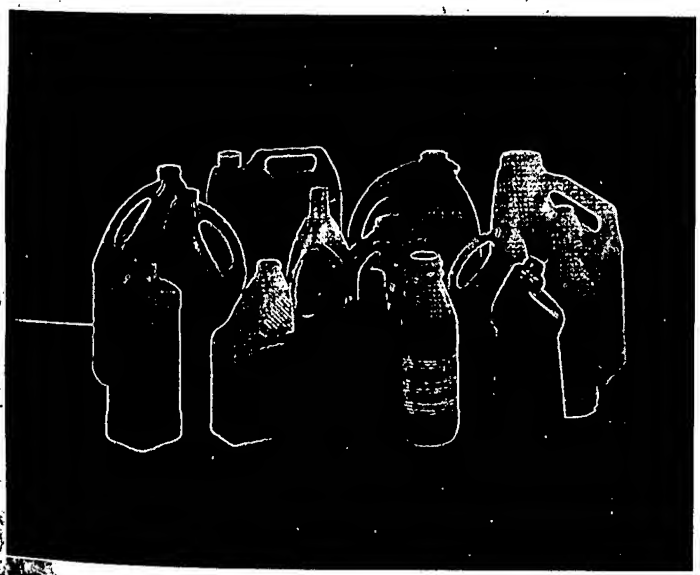

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